UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte Barry Bronson

Appeal No. 2005-1974
Application No. 09/809,213

ON BRIEF

Before KRASS, DIXON and NAPPI, Administrative **Patent Judges**.

NAPPI, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 1 through 28. For the reasons stated *infra* we affirm-in-part the examiner's rejection of these claims.

The Invention

The invention relates to an apparatus for displaying images based upon the brain's ability to perform binocular summation of differing images. See page 1 of appellant's specification. The apparatus uses two displays; each presents an image to one of the viewer's eyes. There is a display for the viewer's left eye and the other for the viewer's right eye. A right image is displayed on the right

display and a left image is displayed on the left display. Each of the right and left images are generated from different portions of the source image. Thus, more information is presented to the user's brain then if both images displayed the same thing. See page 3 of appellant's specification. This allows the perceived image, the composite image, to be of higher perceived resolution then each of the left and right images. See page 4 of appellant's specification.

Claim 1 is representative of the invention.

> 1. A method of displaying images using an image display device having two displays, each display being arranged in the image display device so as to be capable of presenting an image to an eye of a user, the method comprising:
>
> dividing image signal data into a first portion, the first portion comprising a first reduced data set defining the entire image, and a second portion, the second portion comprising a second reduced data set defining the entire image, the first portion differing from the second portion;
>
> generating a right display signal using the first portion of the image signal data;
>
> generating a left display signal using the second portion of the image signal data;
>
> transmitting the right display signal to a right one of the displays;
>
> transmitting the left display signal to a left one of the displays;
>
> displaying a right image on the right display from the right display signal, and
>
> displaying a left image on the left display from the left display signal,

substantially simultaneously with the displaying of the right image.

Reference

The reference relied upon by the examiner is:

Morishima et al. (Morishima) 5,589,956 Dec. 31, 1996

Rejections at Issue

Claims 1 through 28 stand rejected under 35 U.S.C. § 102 as being anticipated by Morishima.

Opinion

We have carefully considered the subject matter on appeal, the rejection advanced by the examiner and the evidence of anticipation relied upon by the examiner as support for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, appellant's arguments set forth in the brief along with the examiner's rationale in support of the rejection and arguments in rebuttal set forth in the examiner's answer.

With full consideration being given to the subject matter on appeal, the examiner's rejection and the arguments of appellant and examiner, for the reasons stated *infra*, we sustain the examiner's rejection of claims 1, 2, 4 through 15, 21 and 25 under 35 U.S.C. § 102. We reverse the examiner's rejection of claims 3, 16 through 20, 22 through 24 and 26 through 28 under 35 U.S.C. § 102.

Grouping of the Claims

At the outset, we note that appellant states, on page 3 of the brief that:

> Appellant proposes the following claim groupings. The claims in each grouping stand separately from the claims in the other groupings based on the arguments provided in Section VII. The claim numbers in parentheses are the claims that Appellant specifically addresses as representative of each grouping in the arguments below:
>
> Group 1: claims 1, 2 and 4-9 (1)
> Group 2: claim 3 (3)
> Group 3: claims 10-15 (10)
> Group 4: claims 16-20 (16)
> Group 5: claims 21 and 23 (21)
> Group 6: claim 22 (22)
> Group 7: claim 24(24)
> Group 8: claim 25 (25)
> Group 9: claim 26 (26)
> Group 10:claim 27 (27)
> Group 11:claim 28 (28)

37 C.F.R. § 1.192(c) (7) (July 1, 2003) as amended at 62 Fed. Reg. 53196 (October 10, 1997), which was controlling at the time of appellant's filing of the brief, states:

> For each ground of rejection which appellant contests and which applies to a group of two or more claims, the Board shall select a single claim from the group and shall decide the appeal as to the ground of rejection on the basis of that claim alone unless a statement is included that the claims of the group do not stand or fall together and in the argument under paragraph (c) (8) of this section appellant explains why the claims of the group are believed to be separately patentable. Merely pointing out differences in what the claims cover is not an argument as to why the claims are separately patentable.

Accordingly, we accept appellant's grouping with one exception, groups 5 and 6, we group claim 23 with claim 22, as they are similar in scope.

Accordingly, group 5, consists of claim 21 and group 6 consists of claims 22 and 23 with claim 22 as representative of group 6.

Claim Group 1 (claims 1, 2 and 4-9).

Appellant states, on page 4 of the brief that: "Morishima teaches dividing an input image into separate portions and providing the separate portions to displays associated with one eye." Appellant argues on page 5 of the brief:

> Nowhere does Morishima even suggest that each eye sees a different image. In fact, Morishima teaches the opposite in that only the apparatus for a single eye is shown in the depicted embodiments by that "the apparatus is symmetrical about the center of the face of the observer 6." Col. 4, lines 14-15. This, evidently, the same apparatus is replicated for the other of the user's eyes.

The examiner's rejection is set forth on pages 4 through 9 of the answer. In response to the appellant's arguments the examiner asserts that figure elements 73 and 74 of figure 19 show the two displays produced by image controller and that providing a different display to each eye is not claimed in claim 1.

We concur with the examiner. The only mention of a user's eye in claim 1 is in the preamble, which states: "an image display device having two displays, each display being arranged in the image display device so as to be capable of presenting an image to an eye of a user." We find this limitation to be broad and is not limited to each display presenting an image to a separate eye of the user, but also encompasses the situation where each display presents an image to the same eye of the user, i.e. two displays to one eye. Claim 1 also includes

limitations of generating, transmitting and displaying left and right displays. However, we find no recitation of displays for the left and right eye. As such, we consider the scope of claim 1 to be broad enough to encompass two displays presenting right and left images to one eye of a user.

Having determined the scope of the claim we turn to the teachings of Morishima. The examiner relies upon the embodiment depicted in figure 19 (the sixth embodiment, see column 3, lines 44-50) to anticipate claim 1 and we concur. As shown in figure 19 there are two displays, items 74 and 73 the image from display 74 is presented to the right of the image from display 73 (see synthesized image), and we find that one display presents the image data points of one of the displays represent image data between the pixels of the other display. The two displays, through Hologram Optical Element (HOE) 78, provide a synthesized image, which is of a higher resolution then the image displayed on the individual displays. See column 14, lines 35 to 45. Though, as stated by appellant, this embodiment presents two images on two displays to one eye of the viewer, however, as stated *supra,* we find presenting two images to one eye to be within the scope of the claim 1. Accordingly, we sustain the examiner's rejection of independent claim 1 or the claims dependent upon claim 1, claims 2, and 4 through 9.

Claim Group 2 (Claim 3).

Appellant argues on page 5 of the brief that the rejection of claim 3 is in error for the reasons discussed with respect to claim 1 and because " Morishima

does not teach or even suggest providing different images to the person's eyes, much less selecting left eye image data values of which none are included in the right eye image data values."

In response the examiner provides the same response discussed above with respect to claim 1.

We concur with the appellant. Claim 3 depends upon claim 1, and adds the limitation of "the step of selecting a left set of image data values includes the step of selecting image data values of which none are included in the right set of image data values." Though as discussed *supra,* we disagree with the appellant and find that Morishima anticipates claim 1 and claims 1 and 3 do not contain a limitation directed to presenting different images to different eyes. We nonetheless do not find that Morishima teaches that the left data values are selected such that none of the data values are in the right data values. Accordingly, we will not sustain the examiner's rejection of claim 3.

Group 3 (Claims 10-15).

Appellant argues on page 6 of the brief:

> As explained above, Morishima does not teach or suggest displaying separate images to both eyes uing different portions of a source image signal. Morishima also does not teach or suggest displaying separate images to both eyes using portions of a source image signal where the portions comprise reduced data sets defining the entire image. At least for these reasons, claim 10 is neither anticipated by, nor rendered obvious over, Morishima and accordingly, the Examiner erred in rejecting claim 10.

We are not convinced by appellant's arguments for many of the same reasons stated above with respect to claim 1. We do not find that claim 10 is directed to providing separate images to both eyes as argued by appellant. As with claim 1 discussed above, claim 10 only includes limitations directed to the user's eyes in the preamble, stating "each display being arranged in the image display device so as to be capable of presenting an image to an eye of a user." Claim 10 also contains limitations to displaying right and left images, but does not identify that the images are for a right and left eye. Thus, as discussed above with respect to claim 1, we consider the scope of claim 10 to be broad enough to encompass two displays presenting right and left images to one eye of a user. As discussed *supra* we find that Morishima teaches these limitations. Accordingly, we sustain the examiner's rejection of independent claim 10 or the claims dependent upon claim 10, claims 11 through 15.

Group 4 (claims 16-20).

On page 6 of the brief, appellant ague:

> Claim 16 is directed to an image display device that comprises, among other limitations, a controller arranged to utilize first and second portions of image signal data to generate right and left display signals where the first and second portions comprise first and second reduced data sets. Claim 16 also requires right and left displays that receive right and left display signals, respectively. Morishima does not teach or even suggest this combination of limitations.

We are convinced by appellant's arguments. Claim 16, unlike claims 1 or 10, includes the limitations or a right display to "display a right image to a right eye of a user" and a left display to "display a left image to the left eye of the user." As

discussed *infra* we find that Morishima teaches in figure 28 displaying two portions of an image, two portions of an image with parallax therebetween, to different eyes of a user. However, we do not find that Morishima teaches that the two portions of image data in that embodiment each contain a reduced data set of defining the image. Accordingly, we will not sustain the examiner's rejection of independent claim 16, or the claims dependent upon claim 16, claims 17 through 20.

Group 5 (claim 21).

On page 6 of appellant argues:

> Method claim 21 requires generating first and second sets of pixels from an input image using different portions of the input image and proving the first and second sets of pixels to a left eye display and right eye display, respectively. Morishima neither teaches nor suggests such a combination of limitations.

We are not convinced by appellant's arguments. As appellant points out on page 4 of the brief:

> Figure 28B shows two eyes of a person receiving visual input. As explained in the associated text of Morishima, the images provided to a person's eyes have an associated parallax angle. Column 17, lines 18-42. Morishima does not teach or suggest providing different images to each of a person's eyes.

However, appellant never explains how the claimed two sets of pixels differ from Morishima's two sets of image data with parallax therebetween. We find no limitation in claim 21 which differentiates the claim from the embodiment of figure 28. Claim 21 contains the limitation "generating first and second sets of pixels from an input image using different portions of the input image." Morishima

states: "A 3-dimensional image can be observed by providing two pieces of image information having a parallax therebetween to two systems for the right and left eyes." See column 17, lines 18-20. We consider this statement from Morishima to teach that there is one 3-dimensional image with two pieces, sets, of image data. As such, we find no difference between appellant's claimed first and second sets of pixels from an input image and Morishima's two pieces of image information from a 3-dimensional image. Accordingly, we sustain the examiner's rejection of claim 21.

Groups 6 and 7 (claims 22, 23 and 24).

Appellant argues on page 7 of the of the brief: "dependent claim 22 specifies that generating the first and second sets of pixels comprises selecting different rows and columns of the input image when generating the first set of pixels then when generating the second set of pixels. Morishima does not teach or even suggest providing different images to each eye much less selecting different rows and columns of an input image."

We are convinced by appellant's argument. Claims 22 and 23 are dependent upon claim 21, and claim 23 adds the limitation of "generating the first and second sets of pixels comprises selecting different columns from the input image when generating the first set of pixels than when generating the second set of pixels." Claim 22 is slightly narrower as it is limited to selecting from different rows and columns. Nonetheless, while we find that Morishima teaches the limitations of independent claim 21, we do not find a disclosure in Morishima

as to how the pieces of the 3-dimensional image are generated. Thus, we do not find that Morishima teaches that the two sets of pixels are selected by based upon row and column of the pixels in the image. Accordingly, we will not sustain the examiner's rejection of claims 22 and 23.

Claim 24 is dependent upon claim 23. Similarly, we will not sustain the examiner's rejection of claim 24 for the reasons stated *supra* with respect to claim 23.

Group 8 (Claim 25).

Appellant argues on page 7 of the brief:

> Claim 25 is an apparatus claim that comprises, among other limitations, a controller coupled to the left and right eye displays, wherein the controller receives an input image and, from the input image, generates a left eye image to be shown on the left eye display and a right eye image to be shown on the right eye display. Further, the claimed controller generates the left and right eye images using portions of the input image, where in the portion use to generate the left eye image differs from the portion used to generate the right eye image. The Examiner erred in rejecting claim 25, and its dependent claims, in that Morishima does not teach or suggest generating left and right eye images using different portions of an input image.

We are not convinced by appellant's arguments. As stated *supra* with respect to claim 21 we find that the embodiment of figure 28 teaches that different portions of the image are presented to the left and right eyes. Since the images are portions of a 3-dimemsonal image with parallax therebetween, we find that the two portions necessarily differ from each other. Accordingly, we sustain the examiner's rejection of claim 25.

Group 9, 10 and 11 (Claims 26, 27 and 28).

Claims 26 and 27 depend upon claim 25, and claim 28 depends upon claim 27. These claims contain limitations similar to claims 22 through 23, limitations directed to selecting two sets of pixels based upon row and column of the pixels in the image. As stated *supra* we do not find a disclosure in Morishima as to how the pieces of the 3-dimensional image are generated and we do not find that Morishima teaches that the two sets of pixels are selected by based upon row and column of the pixels in the image. Accordingly, we will not sustain the examiner's rejection of claims 26, 27 and 28.

Conclusion

Only those arguments actually made by appellant have been considered in this decision. Arguments which appellant could have made but chose not to make in the brief or by filing a reply brief have not been considered and are deemed waived by appellant [see 37 CFR § 41.37]. Support for this rule has been demonstrated by our reviewing court in ***In re Berger***, 279 F.3d 975, 984, 61 USPQ2d 1523, 1528-1529 (Fed. Cir. 2002) wherein the Federal Circuit stated that because the appellants did not contest the merits of the rejections in his brief to the Federal Circuit , the issue is waived. ***See also In re Watts***, 354 F.3d 1362, 1368, 69 USPQ2d 1453, 1458 (Fed. Cir. 2004).

In view of the forgoing, we will sustain the examiner's rejection of claims 1, 2, 4 through 15, 21 and 25 under 35 U.S.C. § 102. We reverse the examiner's

rejection of claims 3, 16 through 20, 22 through 24 and 26 through 28 under 35 U.S.C. § 102. The decision of the examiner is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a) (1) (iv).

AFFIRMED-IN-PART

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